

## **REMARKS**

### Claim Rejections Under 35 USC § 103

Claims 1, 8, 9, 11-15, 26, 35, 36, 38-42 and 59 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Magnusson, et al. (U.S. Patent No. 6,617,418). This rejection is respectfully traversed.

Magnusson is cited as allegedly teaching the reaction mixture of at least one oxetane and optionally another monomer or a polymer; this reaction mixture can be further "processed", such as by chain extension with a lactone. The hyperbranched polyether of Magnusson, however, is apparently prepared by performing a ring opening of oxetane. In contrast, the present hyperbranched polymer is prepared by step-growth polymerization. One skilled in the art will appreciate that the structure resulting from a ring-opening polymerization and a step-growth polymerization will be significantly different. Moreover, Magnusson does not appear to appreciate any significance to the use of lactone. In contrast, the present inventors have determined that, in certain embodiments, it is the reaction of the highly branched polymer with the lactone that gives the structure the desired properties. Accordingly, it is submitted that the presently claimed structure, and the characteristics thereof, are neither taught nor suggested by Magnusson.

Claims 26, 35, 36, 38-42 and 59 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Barsotti, et al. (U.S. Publication No. 2004/0043152A1). This rejection is respectfully traversed.

Barsotti appears to teach the reaction of a first functional monomer, a second functional monomer and lactone at the same time. In contrast, the present claims are directed to preparing the reaction product of two functional monomers, and then further reacting that product with lactone. Accordingly, a structurally different compound results in the present invention as compared to Barsotti. Again, the structure of the compound of the present invention contributes to the properties of that compound. Moreover, the Barsotti reference appears to be limited to use in liquid coatings. One skilled in the art will appreciate that the formulation and

Serial No.: 10/737,283  
December 16, 2003

components that are effective and usable in a liquid coating can vary significantly from those appropriate for a powder coating. For example, the processing and handling of powder coatings differs significantly from that of liquid coatings. Accordingly, the teaching of a liquid coating composition does not render obvious a powder coating composition and vice versa. A declaration by one skilled in the art to this effect will be provided if deemed necessary.

Claims 1, 4, 5, 8, 9, 11-15, 26, 31, 32, 35, 36, 38-42 and 59 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Bruchmann, et al. (U.S. Patent No. 6,376,637) in combination with Jansen, et al. (U.S. Patent No. 5,788,989). This rejection is respectfully traversed.

Bruchmann is cited as allegedly teaching dendritic or highly branched polyurethanes that are chain extended with alkylene oxides; Jansen is cited as allegedly teaching the equivalence of alkylene oxides and lactones as reactants. Thus, the Office Action concludes, it would have been obvious to use lactones as the chain extender in Bruchmann. Applicants respectfully submit that there is no teaching or motivation in either of the references to combine the teachings in the manner suggested in the Office Action. Even if there was motivation to combine the teachings, which Applicants do not concede, it would not result in the present invention. Jansen discloses a laundry list of items that are described as being "suitable reactants" to modify dendrimers. That they may all be suitable reactants, however, does not teach that they are equivalent functionally. Significantly, there is no teaching or suggestion that everything in this list would react with a dendrimer to give compounds that would all be equivalent. In other words, everything in the list provided by Jansen may react with a dendrimer, but the result of each of these reactions may give compounds that are significantly different in terms of chemistry and performance. Nothing in either of the references suggest the desirability of forming the reaction product of a highly branched polymer and a lactone, or the use of such a product in a powder coating. Applicants respectfully submit that at best this is an "obvious to try" argument, which is not the standard of obviousness.


Serial No.: 10/737,283  
December 16, 2003

SUMMARY

Applicants have discovered a novel compound that utilizes lactone to get particular performance characteristics, as discussed in the present specification and examples. None of the references, either alone or in combination, recognize the significance of combining a highly branched polymer and a lactone, or using such a composition in a powder coating. Accordingly, it is submitted that the claims are in condition for a Notice of Allowance. Such action is respectfully requested at an early date.

Respectfully submitted,

DIANE R. MEYERS  
Registration No. 38,968  
Attorney for Applicant

  
Telephone: (412) 434-2931  
Facsimile: (412) 434-4292

Pittsburgh, Pennsylvania  
November 23, 2005